

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A hydrodynamic static mixing apparatus comprising a preselected and predetermined configuration and length of undulating tubular conduit for mixing and/or transporting various substances, including fluids and solids contained in slurries, said conduit being formed by a coil with the diameter of the conduit being greater than the coil helix diameter, said conduit including a generally round internal cross-section having a hydraulic radius r_c and a generally helical undulation having a path radius r_h , said conduit, including an open inner channel along the longitudinal axis of the conduit, the inner channel having a radius r_i that is substantially equal to $r_c - r_h$ and said conduit is adapted to be incorporated into systems that perform one or more of the functions of fluid or slurry transport, processing and separation.

2-13. (Canceled)

14. (Original) A hydrodynamic static mixing apparatus as claimed in claim 1 wherein said conduit is interposed at various stages of either separate, or simultaneous, transportation, processing

and separation of oil-laden fluids in an oil sands bitumen extraction system.

15. (Currently Amended) A hydrodynamic static mixing apparatus as claimed in claim 2 wherein said conduit has an interior undulating structure at the upper portions thereof, which provides a serpentine path that causes dynamic mixing of its flowing contents due to primary and secondary flow patterns.

16-21. (Canceled)